SATISFACTION LEVEL WITH NEIGHBOURHOODS IN LOW-INCOME HOUSING: A CASE STUDY OF JOHANNESBURG, SOUTH AFRICA

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Abstract
For the past 17 years, the South Africa government has been providing housing schemes for the low-income and disadvantaged group. These low-income housing schemes have not, however, been holistically evaluated. Based on a post occupancy evaluation protocol of occupant survey of low-income housing scheme in Johannesburg, South Africa, the article presents the beneficiaries' judgement and assessment of the environment in which they are living. Face-to-face interview with 78 occupants revealed that they attached great importance to the level of satisfaction with their neighbourhoods. The most important factor associated with their neighbourhood satisfaction was privacy, which was a reflection of their previously living background.

Keywords: residential satisfaction, neighbourhood, low-income housing, Gauteng

INTRODUCTION

The perception of residents toward their housing condition can be studied by examining their housing satisfaction. Residential satisfaction has been a popular research topic over time for the following reasons. First, residential satisfaction has been accepted as important component of individuals' quality of life. Second, individuals' or household appraisals of their housing and neighbourhood determine the way they respond to residential environment and this in most cases form the basis for public policy feedback. Hence, the awareness about factors that shapes residential satisfaction is critical for a better understanding of how household forms the notion of satisfaction with a housing unit or how they form their mobility decision process (Lu, 1999).

Residents' housing satisfaction refers to the degree of contentment experienced by an individual or families relative to their current housing situation (McCray and Day, 1977). However, the theories of residential satisfaction are based on the perception that residential satisfaction measures the difference between households' actual and desired housing and neighbourhood situations (Galster and Hesser, 1981). Households or individuals thus make their resolution about residential conditions based on their needs and aspirations. Besides, satisfaction with their residential conditions indicates the absence of complaints as their needs meet their aspirations. Contrariwise, they are likely to be dissatisfied if their housing and neighbourhood conditions do not meet their residential needs and aspirations. Morris and Winter (1978) informs that housing satisfaction is an index of the level of contentment with current housing conditions. Morris further states that the term refers to an entire variety of satisfaction from 'very dissatisfied' to 'very satisfied' rather than just a state of being 'satisfied'. Also, Husna and Nurizan (1987)

inform that satisfaction with a given housing unit results from fulfilment of any need and dissatisfaction which exists when needs remain unfilled. The concept of housing satisfaction has been studied by many researchers (Awotona, 1990; Bruine and Cook, 1997; Connerly and Marans, 1985; Carvalho et al., 1997; Husna and Nurizan, 1987; Morris and Winter, 1978). Erstwhile studies on residential satisfaction have examined many attributes such as the dwelling unit, neighbourhood and environment, and users' characteristics that affect residential satisfaction (Lu, 1999). However, satisfaction with neighbourhood has been noted to be an important factor of housing satisfaction as the literature show that residents would rather remain where they are, even if it means continuing to live in dilapidated or run-down structures than to move to new units away from friends and the familiarity of their homes and neighbourhoods (Gruber and Shelton, 1987). Typical neighbourhood features includes neighbourhood facilities, such schools, clinics, shops, community halls, amongst others. To this end, the concept of residential satisfaction has been used, among other uses, as:

- a key predictor of an individual's perceptions of general 'quality of life' (Campbell et al., 1976);
- an indicator of incipient residential mobility, and hence has altered housing demands and affected neighbourhood change (Varady, 1983);
- an ad hoc evaluative measure for judging the success of housing developments constructed by the private sector (Zehner, 1977) and by the public sector (Marans and Rodgers, 1975);
- an assessment tool of residents' perceptions of 'inadequacies' in their current housing environment in order to improve the status quo (Michelson, 1977).

Research assessing residents' satisfaction with their dwellings has characteristically focused primarily on the dwelling unit itself with negligible or limited emphasis on the surrounding environment (McCray & Day, 1977). Yet, housing cannot be separated from its surrounding neighbourhood as the level of acceptance or satisfaction may be more dependent on where the unit is situated than on its actual or perceived quality in most cases. Therefore, Onibokun (1974) argues that the habitability of a house is determined not only by the engineering elements, but also by social, behavioural, cultural, and other elements in the entire societal-environmental system. The dwelling according to Onibokun may be adequate from the engineering or from the design point of view but may not necessarily be adequate or satisfactory from the inhabitants' point of view. Thus Onibokun established that the house is only one connection in a chain of factors which determine people's relative satisfaction with their accommodation. Therefore the objective of this paper is present beneficiaries' judgement and assessment of their housing neighbourhood and environment through a post occupancy evaluation protocol of occupant survey of low-income housing scheme in Johannesburg, South Africa.

NEIGHBOURHOOD SATISFACTION

The term neighbourhood is often used to describe the sub-divisions of urban or rural locations such as cities, villages, and towns. In its purest definition, a neighbourhood is the vicinity in which people live. People live next to or near one another in sections of an area and form communities. Those sections have some p articular physical or social characteristics that distinguish them from the rest of the settlements. The basic physical attributes of the space defined by the term neighbourhood have been described in detail by Duany, Zyberk, and Alminana (2003) as a comprehensive planning increment.

The literature on neighbourhoods defines neighbourhood in many ways. Brower (1996) informs that its form is derived from a particular pattern of activities, the existence of a common visual motif, an area with continuous boundaries or a network of often-travelled streets. Diverse definitions serve different interests, so that the neighbourhood may be seen as a source of place-identity, an element of urban form, or a unit of decision making. It is presumed that research uses multiple definitions of a neighbourhood simultaneously to reflect the fact that neighbourhood is not a static concept but rather a dynamic one (Talen & Shah, 2007). Likewise, planners and designers have also thought of the neighbourhood setting as a fixed, controllable, and imaginable physical area.

Researchers agree that a neighbourhood should comprise a walkable distance (the distance that a person could pleasantly walk, a 3MPH pace in 5 minutes). However, the actual walkable distance considered has varied from a quarter-mile to one mile from centre to edge (Colabianchi et al., 2007; Hoehner et al., 2005; Talen & Shah, 2007). According to Ladd (1970), black youths drew a much smaller neighbourhood boundary (approximately 0.008- square mile distance that includes 1 block or less). This is consistent with an alternative micro-neighbourhood theory, which considered the neighbourhood as an area that a resident could see from his/her front door, that is, the five or six homes nearest to their house (Ladd, 1970). Similarly, Appleyard (1981) used the term, home territory, where he looked at residents' conception of personal territory in three streets with different traffic hazard. The findings revealed that residents drew their territorial boundaries to a maximum of a street block (between intersections with approximately 6-10 buildings each side), and to a minimum of their own apartment building. Research showed that the micro-neighbourhood deals more with social relationships among neighbours than the physical environment.

Neighbourhood satisfaction refers to occupants' overall evaluation of their neighbourhood. Scholars from many disciplines have examined neighbourhood satisfaction (Amerigo, 2002; Amerigo and Aragones, 1997; Carvalho et al., 1997; Hur and Morrow-Jones, 2008; Marans and Rodgers, 1975). They have used a variety of terminology such as, residential satisfaction, community satisfaction, or satisfaction with residential communities (Amerigo and Aragones, 1997; Cook, 1988; Lee et al., 2008; Marans & Rodgers, 1975). The transposable use of these terminologies, in spite of correlations between them is a problem (Carvalho et al., 1997; Francescato, 2002; Hur and Morrow-Jones, 2008; Lu, 1999; Marans & Rodgers, 1975). For instance, Marans and Rodgers (1975) measured satisfaction with the community, the macro-neighbourhood, and the micro-neighbourhood, and found that satisfaction with community related more to social factors while satisfaction with neighbourhood related more to physical factors. The residential environment includes physical dimensions other than the neighbourhood, such as the dwelling and the neighbours (Amerigo, 2002); and the community environment includes the social aspects as well as the physical ones (Marans and Rodgers, 1975).

Previous studies on housing satisfaction revealed that several features are required to determine the housing satisfaction of a given household or individual. For instance, the availability of desired features and structure types are related; accordingly, different services as provided by different structure types which also affect satisfaction with housing units. Also, the availability of space depends on the structure type, and the amount of space in a dwelling unit correlates with housing satisfaction level (Aigbavboa 2012). Building features have also been found to be strongly related to housing satisfaction (Kaitilla, 1993). Likewise the number of bedrooms, privacy, and the location of the kitchen contributed to the level of dissatisfaction among residents of the core housing program in Nigeria (Ozo, 1990). Further, satisfaction is also associated with the quality of the housing unit (Lord and Rent, 1987). Therefore, residents'

satisfaction is not absolute, and housing conditions are not static, thus, the residents' satisfaction with a set of features or conditions at any given time can be measured only in relative terms (Ukoha and Beamish, 1997).

Satisfaction with neighbourhood features have been observed as a vital determinant of residential satisfaction (Vrbka and Combs, 1991) to the extent that residents are willing to compromise the inefficiencies within the dwelling unit because of the satisfaction that is provided by the neighbourhood facilities and features (Ukoha and Beamish, 1997). Neighbourhood features refer to the location of the dwelling unit, neighbourhood relations, distance to the shopping areas, distance to the workplace or school, distance to the police services, distance to recreational facilities secure and clean environment, the building image and parking facilities amongst others (Aigbavboa and Thwala, 2012; Awotona, 1991). Hence residents of a given housing scheme are most likely to be dissatisfied with housing facilities that require residents to travel or walk long distances to school; to workplace, shopping areas, medical centres and the geographical areas around their dwelling units. Easy access to good public transportation, community and shopping facilities and physical environment variables will provide residents' satisfaction with their housing units.

Research conducted by Bjorlund and Klingborg (2005) in eight Sweden municipalities found the following top neighbourhood factors amongst others to be related to residential satisfaction, these include proximity to commercial areas, building exteriors with high aesthetic values, proximity to open spaces, less noisy environments with no traffic congestion, good reputation, good quality along the housing surroundings, proximity to town centres and a conducive environment. On the other hand findings of a study conducted by Abdul (2006) on residential satisfaction shows that neighbourhood facility factors are the most dominant factors in determining the level of satisfaction towards housing. The study further revealed that factors of neighbourhood facilities that caused a low level of satisfaction were poor public transport, lack of sport fields, lack of multipurpose halls, lack of parking areas and lack of safe facilities for the disabled. Also, Ramdane and Abdul (2000) study on the factors of neighbourhood facilities to evaluate the level of residential satisfaction; found that neighbourhood factors have a huge impact on the overall satisfaction with the housing facilities. Moreover, Troy (1973) informs that households or individuals decide the area to inhabit based on their social status. However, Troy further states that when a household lives in area that fits their social status, their level of satisfaction with the neighbourhood facilities will increase, emphasising the significance of social class to residential satisfaction. This is not necessarily relevant as individuals can live in environment below their social status provided it meets their housing norm (Gruber and Shelton, 1987; Vrbka and Combs, 1991).

Furthermore, a study on residential satisfaction in student housing (Aigbavboa and Thwala, 2012; Thomsen, 2008) find that the distance students have to walk to classes, student centres, security services, school bus station, sport field, gymnasium, computer laboratories and worship facilities are major factors that determines satisfaction in student housing. In addition, Khozaei et al. (2010) says that student living on campus are mostly satisfied with student neighbourhood facilities that are close to classes, food cafeterias and exposure to opportunities of meeting new people. In addition Kollekci and Berkoz (2006) submit that satisfaction with neighbourhood facilities reflects the resident's satisfaction towards the housing facilities and its surroundings.

Research has pointed out the complex characteristics of neighbourhood satisfaction (Marans & Spreckelmeyer, 1981). It has also been identified that aesthetics, or pleasantness to the eye, is one of the most important factors in neighbourhood satisfaction (Kearney, 2006; Sirgy &

Cornwell, 2002). Whilst, social and personal characteristics such as neighbourhood cohesion, or network, were other factors associated with neighbourhood satisfaction (Chapman & Lombard, 2006; Morrow-Jones, et al., 2005; Okun, 1993; Westaway, 2007). The neighbourhood and environmental features which are considered for the present study are summarised in Table 1.0 below.

METHDOLOGY

Low-income housing schemes are perceived by the South Africa government as the way for the poor, low-income and the previously disadvantaged groups in the country to own their houses. Also, it enables them to live under better housing conditions by ensuring the provision of minimum acceptable standards, amenities, and facilities within and outside the dwelling units. The philosophy behind this is to contribute to an improvement in their quality of life. Amerigo (1990) in a study on the residential satisfaction in council housing in Spain emphasised the significance of obtaining distinct geographical placement of a residential satisfaction samples. In this study, the geographical area chosen is Johannesburg in the Gauteng Province of South Africa. There are various government subsidised housing schemes in, Johannesburg, Gauteng Province.

Gauteng is a province ofSouth Africa. It was formed from part of the old Transvaal province after South Africa's first all-race elections on 27 April 1994. It was initially named Pretoria-Witwatersrand-Vereeniging (PWV) and was renamed Gauteng in December 1994. Gauteng, (a Sesotho word for 'place of gold') serves as the economic engine room of the country and the subcontinent, responsible for over 35% of the country's GDP. Despite it is geographically the smallest of the nine provinces. The main cities in Gauteng Province are Greater Johannesburg region, the biggest city in southern Africa, and Pretoria, the administrative capital of the country. Gauteng Province is currently home to about 22.4 percent of the country's population, or 11.328 million people. The City of Johannesburg (CoJ) has the largest population share of the province, at 34.3 percent or 3.884 million people. This is followed by Ekurhuleni at 26.8 percent and the City of Tshwane (CoT) at 23.2 percent (Gauteng Provincial Government, 2012). The growth is mainly because of the high influx of people from other provinces (rural urban migration), neighbouring countries, and others. This is due to the fact that Gauteng is considered the economic hub and power house of Southern Africa and contributes heavily in the financial, manufacturing, transport, technology and telecommunications sectors, and construction amongst others. Hence, because of the high influx of people into the province, housing provision has become a burden and a nightmare to the Gauteng Provincial Government (Provincial Housing Department) and the National Department of Human Settlement, with a majority of the low-income housing construction in the country being given the almost consideration in Gauteng-Johannesburg and its associated towns to be specific. Past neighbourhood satisfaction studies have utilized different data sets, and some have been made publicly available (Rossi & Weber, 1996). One example is the American Housing Survey (AHS), a national survey based on a non-random sample of 50,000 households administered by the U.S. Census Bureau every other year, which measures neighbourhood satisfaction and perceived quality (Greenberg & Crossney, 2007). AHS Survey is about the quality of the neighbourhood, asking respondents the following question: —How would you rate your neighbourhood on a scale of 1 to 10? Where 1 is bad and 10 is best (Chapman & Lombard, 2006; see also Lu, 1999). Examples of AHS indicators are crime, heavy traffic, bad smells in the neighbourhood, abandoned or rundown buildings, trash and junk in the street, problems in neighbourhood schools, or housing satisfaction (Greenberg & Crossney, 2007). The AHS approach is also used in the current study, however, but on a scale of 1 to 5. Where 1 is bad (strongly dissatisfied) and 5 is best (very satisfied). Other studies have

used proprietary data sets to study neighbourhood satisfaction and perception (see Kasarda & Janowitz, 1974) which has not been adopted in the present study.

This study uses data from occupants of four different housing subsidy schemes in Johannesburg. The four housing subsidy schemes chosen are Ivory Park Extension 2, Kanana Zone 12, Reiger Park, and Diepsloot. These four chosen developments are all houses given to the low-income group through the South Africa housing subsidy scheme. The average size of a housing unit in this location is 40m2. A structured questionnaire was used to conduct interviews with beneficiaries at the four locations. This approach was followed to improve consistency in the responses and ease of analysis. The method was also considered appropriate for a study amongst the low-income group. This is because it has been suggested that when dealing with a population likely to be of the low-income and disadvantaged group with low interest and motivation, the structured interview for data collection is the preferable option (Fowler, 1993). The questionnaire was designed to seek the opinion of the respondents on their level of satisfaction/dissatisfaction on a set of listed neighbourhood features. The respondents were asked to indicate the level of satisfaction/dissatisfaction on a scale of 1 to 5 Likert-type scales. The Likert scale ranges from 1 indicating 'very dissatisfied' to 5 indicating 'very satisfied' was used.

Beneficiaries were randomly selected in all four locations visited; these were interviewed given the fact that they have been resident in the areas for more than a month. Out of the 120 questionnaires sent out, 78 were received back; representing a sixty five percentage (65%) of the total sampled frame. The data collected were analysis using both descriptive and inferential statistics. The data presentation and analysis made use of frequency distributions and percentages of all the respondents. The questionnaire was administered to the heads of households or to the spouses of the heads of household in the sampled household. One household head per house was engaged in the questionnaire administration.

FINDINGS AND DISCUSSION

Findings emanating from the post occupants survey when the residents' length of occupancy was assessed revealed that about 29.50% of the occupants have been living in the subsidised housing unit for more than five years. Those who have lived there between three and five years are 21.80% and 25.60% for those who have been living there for less than one year. In essence recipients of the housing subsidies who have lived in their housing units for many years completed most of the questionnaires. It can therefore be inferred that the respondents have adequate knowledge of their living apartments and neighbourhood.

Further, when the beneficiaries' intended duration of stay in the housing units beyond what has already be reported above; findings showed that about 94.90% of the occupants indicated that they intend to live in the housing units for more than five years while 3.80% indicated they intend not to live in the units for a period of 3-5 years and 1.30% indicated they intend not to live in the area for more than one year. This is a further validation that the occupants' response in the neighbourhood satisfaction survey is based on unpretentious motive, because there is an attachment to the neighbourhood.

In addition, when the residents were asked of their previous accommodation status, before the units were allocated to them, 81.0% revealed that they were living in shacks; 17.0% were living in informal settlement, while 2.0% were homeless (absolute homelessness) before the allocation. The finding revealed that the progressive realization of the right to adequate housing as contained in the South Africa Constitution is being achieved. Also, in line with the housing

strategies as contained in the housing policy document; to prioritize the housing needs of lower income and disadvantage groups, the result revealed that the government is giving assistance to low-income groups and the homeless enabling them to become homeowners and improving their quality of life. Also, when occupants were asked the impact of the allocated housing units to them, 29.6% indicated that it has met their shelter need, while 16.6% said it has met their privacy need compared to their previous accommodation, 9.1% indicated it has met their investment need as they have now been able to use the money they would have used for paying rent for other investment.

The survey also revealed that all the occupants were South African citizens; because all respondents were born in South Africa and from the nine provinces. This was in line with the basic requirement of the South African government to qualify as a beneficiary for a housing subsidy. It further confirms the government responsibility in providing housing for it citizens. This made through the housing clause on the freedom charter, that "there shall be houses, security and comfort for all… All South Africa citizens shall have the right to be decently housed and to bring up their families in comfort and security". Findings also showed that 34.6% of the respondents are originally from the Limpopo Province. While only 10.3% came from Gauteng Province. This shows why the Gauteng Province has always had the highest number of housing backlog in the country, revealing that most occupants (beneficiaries of low-income housing) who had been given houses and others on the housing waiting list might not necessary be from Gauteng province.

Table 1 shows the distribution of the mean item score of occupants' level of satisfaction based on the assessed neighbourhood elements. The numbers of the respondents who are satisfied with each of the neighbourhood and environmental attributes are indicated starting with the highest. This implies that the criteria having the least mean will have the highest level of satisfaction, while the criteria with the highest mean will have the highest level of dissatisfaction. Hence, the survey findings revealed that, privacy from other neighbours (M=1.85; SD=0.808) and absence of heavy traffic in the neighbourhood (M=1.89; SD=0.812) were rated as very satisfactory; followed by the location of the dwelling unit in the neighbourhood (M=1.95; SD=0.908), and Good relationship with the neighbour (M=1.96; SD=.697). Likewise, physical condition and appearance of the neighbourhood (M=2.64; SD=0.895), general cleanliness of the neighbourhood (M=2.73; SD=0.816); incidence of burglary activities (M=2.80; SD=0.893) were all rated as very dissatisfactory by the occupants. The level of occupants' satisfaction with privacy from other neighbours is a direct reflection of their previous accommodation as findings above have revealed. Findings from the study conforms to previous studies on housing satisfaction as revealed that several features are required to determine the occupants satisfaction with their neighbourhood and environment.

***Table 1**: Neighbourhood and Environmental attributes*

Neighbourhood attributes	M	SD
Privacy from other neighbours	1.85	.808
Heavy traffic	1.89	.812
Location of dwelling unit	1.95	.908
Good relationship with the neighbour	1.96	.697
Closeness to workplace	1.96	.880
Closeness to shopping areas	1.99	.786
Closeness to schools	2.04	.861
Closeness to hospitals/clinics	2.32	.752
Closeness to the place of worship	2.34	.870

Public transportation and services	2.37	.969
Landscape of the neighbourhood	2.49	.876
Parking facilities	2.51	.685
Walkways and access to main roads	2.51	.702
Trash and junk in the street	2.52	.702
Closeness to playground and other recreational facilities	2.53	.704
Problems in neighbourhood schools	2.59	.860
Street and highway noise	2.62	.960
Secure environment	2.63	.979
Physical condition and appearance of the neighbourhood	2.64	.895
General cleanliness of the neighbourhood	2.73	.816
Proximity to Police services	2.74	.885
Police protection	2.78	.759
Incidence of burglary activities	2.80	.838
Crime	2.95	.893

Furthermore, the study also support Bjorlund and Klingborg (2005) findings done in eight Sweden municipalities, where it was found that residents neighbourhood satisfaction is related to the their satisfaction with proximity to commercial areas, building exteriors with high aesthetic values, proximity to open spaces, less noisy environments with no traffic congestion, good reputation, good quality along the housing surroundings, proximity to town centres and a conducive environment. On the other hand the current study findings did not support the study conducted by Abdul (2008) where it was highlighted that the neighbourhood facility factors that are most dominant in determining the level of satisfaction towards housing are low level of satisfaction with the public transport, and lack of parking areas. However, the present study finding is also consistent with the alternative micro- neighbourhood theory, which deals with social relationships among neighbours as the present study has shown - Good relationship with the neighbour (M=1.96; SD=.697). Further finding also identified that aesthetics, or pleasantness to the eye, is one of the most important factors in neighbourhood satisfaction as supported by the works of Kearney (2006) and Sirgy and Cornwell (2002). The result from the research further revealed the complex characteristics of neighbourhood satisfaction as also pointed out by the works of Amerigo and Aragones (1997), Marans and Rodgers, (1975) and Marans & Spreckelmeyer (1981).

CONCLUSIONS AND RECOMMENDATIONS

This paper examined neighbourhood satisfaction in the context of some selected features in four subsidy housing schemes in Johannesburg. Findings from the study supported work done by previous scholars that satisfaction with neighbourhood features is a vital determinant of residential satisfaction to the extent that residents are willing to compromise the inefficiencies within the dwelling unit because of the satisfaction that is provided by the neighbourhood facilities and features. Also, the survey findings revealed that, privacy from other neighbours was rated as very satisfactory by the occupants' which was a reflection of their previous accommodation. Further findings revealed that the occupants' were very dissatisfied with the physical condition and appearance of the neighbourhood, general cleanliness of the neighbourhood; incidence of burglary activities because of the high level of crime in the housing locations.

Further findings from the research revealed that the progressive realization of the right to

adequate housing as contained in the South Africa constitution is being met by the government, as a majority of the beneficiaries that were allocated houses were South Africa citizens who mostly were living in shacks and some even homeless. It can be concluded that the South Africa government is responsible to the disadvantaged group (even though there are issues with the pace of service delivery and the quality of the delivered housing); and it is still the major player when it comes to the progressive realization of the right to sustainable human settlement for the poor and low-income groups in the country.

Though findings from the study revealed the neighbourhood features which subsidised low-income housing occupants are satisfied with; however, the study only focused on four low-income housing locations in Johannesburg, Gauteng Province. Findings from the research do show a level of biasness because a limited area was sample. But findings are indicative of the determinants of neighbourhood and environmental features that bring about residential satisfaction in low-income housing. In terms of reliability of the methodology adopted, when the procedure is followed in a larger population, findings would justify the current study. Therefore, the results revealed in this study gives valuable insights for the Department of Human Settlement towards the improvement of much better low-income housing neighbourhood space in future development and in the modification of exiting housing location. That said, the study suggests ways in which the Department of Human Settlement could improve low-income housing neighbourhood:

- They should first improve the physical upkeep of the neighbourhood;
- Next, they should increase the amount of vegetation − plant flowers and trees;
- Encourage residents to do gardening, by doing so, they could provide eyes-on street, maintain higher upkeep, and make residents satisfied with (visual) diversity in the neighbourhood;
- Location low-income housing close to Police services, thus combating the incidence of burglary activities and crime providing a secure environment;
- Locate the playground and other recreational facilities closer to the housing location and
- They should locate low-income housing closer to amenities and not at on urban peripheries, far from jobs and services.

REFERENCES

Abdul, G. S. and N. A. Yusof (2006). Residential Satisfaction in Low-cost housing in Malaysia. Report of Research

Aigbavboa, C. O. (2012). Post Occupancy Evaluation of Housing Subsidy Beneficiaries: A case study of the Gauteng Province of South Africa. Holland, LAP Lambert Academic Publishing.

Aigbavboa, C. O. and W. D. Thwala (2012). An appraisal of housing satisfaction in South Africa low income housing scheme. The International Journal of Construction Management 12(1): 1-21.

Amerigo, M. (2002). Residential environment: Choice, satisfaction, and behaviour. A psychological approach to the study of residential satisfaction. J. A. Aragonés, G. Francesca and T. Gärling. Westport, CT, Bergin & Garvey: 81-99.

Amerigo, M. A. (1990). The perception of residential environment and environment role.

Culture, Space and History. R. Pamir, V. Iuramoglu and N. Teymur, Ankara, M.E.T.V.: Faculty of Architecture. V.

Amerigo, M. A. and I. J. Aragones (1997). A theoretical and methodological approach to the

study of Residential satisfaction. Journal of Environmental Psychology 17: 47-57.
Awotona, A. (1990). Nigerian Government Participation in Housing: 1970- 1980. Habitat International 14(10): 17-40
Brower, S. (1996). Good neighbourhoods: Study of in-town and suburban residential environments. Westport, CT, Praeger Publishers.
Bruin, M. and C. Cook (1997). Understanding constmints and residential satisfaction among low-income single-parent families. Environment and Behavior 29(4): 532-553.
Campbell, A., P. E. Converse, et al. (1976). The quality of the America life: Perceptions, evaluations, and satisfaction, New York: Russell Sage Foundation.
Carvalho, M., V. R. George, et al. (1997). Residential satisfaction in conominos exclusivos
(gate-guarded neighbourhoods) in Brazil. Environment and Behavior 29: 734–768.
Chapman, D. W. and J. R. Lombard (2006). Determinants of neighbourhood satisfaction in fee-based gated and nongated communities. Urban Affairs Review 41(6): 769-799.
Urban Affairs Review 41: 769-799. Colabianchi, N., M. Dowda, et al. (2007). Towards an understanding of salient neighbourhood boundaries: Adolescent reports of an easy walking di stance and convenient driving distance. International Journal of Behavioural Nutrition and Physical Activity 4(66).
Connerly, C. E. and M. R. W. (1985). Comparing two measures of perceived neighbourhood quality. Social Indicators Research 17: 29-47.
Duany, A., Z.-P. E., et al. (2003). The New Civic Art: Elements of Town Planning. New York, Rizzoli
Galster, G. C. and G. W. Hesser (1981). Residential satisfaction: An empirical critique. Environment and Behavior 13(6): 735-758.
Gauteng Provincial Government. (2012). "Socio-economic review." Retrieved 23 June, 2012, from http://www.finance.gpg.gov.za/GDFDocuments/SERO/SERO%202012.pdf.
Greenberg, M. R. (1999). Improving neighbourhood quality: a hierarchy of needs. Housing Policy Debate 10(601-624).
Gruber, K. J. and G. G. Shelton (1987). Assessment of neighbourhood satisfaction by residents of three housing types. Social Indicators Research 19(303-315).
Hoehner, C. M., L. K. Ramirez, et al. (2005). Perceived and objective environmental measures and physical activity among urban adults. American Journal of Preventive Medicine 28(2S2): 105-116.
Hur, M. and H. Morrow-Jones (2008). Factors that influence resident's satisfaction with neighbourhoods. Environment and Behavior 40(5): 619-635.
Husna, S. and Y. Nurizan (1987). Housing provision and satisfaction of low-income households in Kuala Lumpur. Habitat international 11(4): 27–38.
Kaitilla, S. (1993). Satisfaction with public housing in Papua, New Guinea: the case of West Taraka housing scheme. Environment and Behavior 25: 514-545.
Kasarda, J. D. and M. Janowitz (1974). Community attachment in mass society. American Sociological Review 39(328-39).
Kearney, A. R. (2006). Residential development patterns and neighbourhood satisfaction: Impacts of density and nearby nature. Environment and Behavior 38(1): 112-139.
Kellekc, O. L. and L. Berkoz (2006). Mass housing; User satisfaction in housing and its environment in Istanbul, Turkey. European Journal of Housing Policy 6: 77-99.
Khozaei, F., N. Ayub, et al. (2010). The factors predicting students' satisfaction with university hostels, case study, universiti sains Malaysia. Asian Culture and History 2(2): 148-58.
Ladd, F. C. (1970). Black youths view their environment: Neighbourhood maps. Environment and Behavior 2: 74-99.
Lu, M. (1999). Determinants of Residential Satisfaction: Ordgered Logit vs. Regression

Models. Growth and Change 30(Spring): 264-287.
Marans, R. and K. Sprecklemeyer (1981). Evaluating Built Environment: A Behavioural Approach. Michigan: The University of Michigan, Ann Arbor.
Marans, R. W. and W. Rodgers (1975). Toward an understanding of community satisfaction. Metropolitan America in contemporary perspective. A. H. Hawley and V. P. Rock. New York, Halsted Press: 299-352.
McCray, J. W. and S. S. Day (1977). Housing values, aspirations, and satisfactions as indicators of housing needs. Home Economics Research Journal 5: 244-254.
Michelson, W. (1977). Environment Choice, Human Behaviour, and Residential Satisfaction, Oxford University Press: UK.
Morris, E. W. and M. Winter (1978). Housing, Family and Society, John Wiley and Sons (New York).
Morrow-Jones, H., M. V. Wenning, et al. (2005). Differences in neighbourhood satisfaction between African American and White homeowners. Association of Collegiate Schools of Planning (ACSP46). Kansas City, MO.
Okun, M. A. (1993). Predictors of volunteer status in a retirement community. International Journal of Aging and Human Development 36(1): 57-74.
Onibokun, A. G. (1974). Evaluating Consumers' Satisfaction with Housing: An Application of a System Approach. Journal of American Institute of Planners 40(3): 189-200.
Ozo, A. O. (1986). Public housing policies and the urban poor in the third world. A case study from Nigeria. Third world planning Review 8(1).
Ramdane and A. A. Abdullah (2000). Satisfaction Level with Neighbourhood's in Low-Income Public Housing in Yemen. Property Management 18(4): 230.
Rossi, P. H. and E. W. Weber (1996). The social benefits of homeownership: empirical evidence from national surveys. Housing Policy Debate 7: 1-35.
Sirgy, M. J. and T. Cornwell (2002). How neighbourhood features affect quality of life. Social Indicators Research 59(1): 79-114.
Talen, E. and S. Shah (2007). Neighbourhood evaluation using GIS: An exploratory study. Environment and Behavior 39(5): 583-615.
Thomsen, J. (2008). Student housing-student homes? Aspects of student housing satisfaction, Doctoral Thesis, Norwegian University of Science and Technology, NTNU, 182.
Ukoha, O. M. and J. O. Beamish (1997). Assessment of residents' satisfaction with public housing in Abuja, Nigeria. Habitat international 21(4): 445-460.
Varady, D. (1983). Determinates of residential mobility decisions. Journal of the American Planning Association 49: 184-99.
Vrbka, S. J. and E. R. Combs (1991). Predictors of Neighbourhood and Community Satisfaction. Referred papers of the American Association of Housing Educators Annual Conference. Durham, NH.
Westaway, M. S. (2007). Life and neighbourhood satisfaction of black and white residents in a middle-class suburb of Johannesburg. Psychological Reports 100(2): 489-494.
Zehner, R. (1977). Indicators of the quality of life in new communities. Cambridge, Ballinger.